

CLAIMS:

1. A method for measuring a concentration of solution comprising the steps of:

measuring a transmitted light intensities and/or a scattered light intensities of a solution to be detected containing a specific component before and after mixing a reagent, which changes the optical characteristics of said solution to be detected attributed to said specific component; and

determining the concentration of said specific component in said solution to be detected on the basis of these measured values.

2. The method for measuring a concentration of solution in accordance with claim 1, wherein said transmitted light intensities and said scattered light intensities are measured, and the concentration of said specific component in said solution to be detected in a low concentration region is determined from the measured values of the scattered light intensities before and after the mixing of said reagent, and the concentration of said specific component in said solution to be detected in a high concentration region is determined from the measured values of the transmitted light intensities before and after the mixing of said reagent.

3. The method for measuring a concentration of

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solution in accordance with claim 1, wherein said transmitted light intensities and said scattered light intensities are measured, and the measured values of the transmitted light intensities before and after the mixing of said reagent are compared with the measured values of the scattered light intensities before and after the mixing of said reagent, thereby to detect the occurrence or non-occurrence of a false measurement due to a particle suspending in said solution to be detected.

4. The method for measuring a concentration of solution in accordance with claim 2, wherein at least one of the transmitted light intensities and the scattered light intensities before and after the mixing of said reagent is measured under the same condition for a standard solution with a known concentration and said solution to be detected, and the measured values of said solution to be detected are corrected by the measured values of said standard solution to determine the concentration of said specific component in said solution to be detected.

5.) The method for measuring a concentration of solution in accordance with claim 4, wherein said standard solution is water not containing said specific component.

6. A method for measuring a concentration of solution, comprising the steps of:

determining the protein concentration of said

solution to be detected with said method for measuring a concentration of solution in accordance with claim 1;

determining a concentration of an optical active substance as said specific component in said solution to be detected by measuring the optiacal rotation of said solution to be detected before the mixing of said reagent; and then

determining the concentration of the optical active substance other than said protein from said protein concentration and said optical active substance.

7. An apparatus for measuring a concentration of solution comprising a light source for irradiating a solution to be detected with light; a sample cell for holding said solution to be detected such that said light transmits through said solution to be detected; a photosensor 1 for detecting the light transmitted through said solution to be detected and/or a photosensor 2 for detecting the scattered light generated when said light has propagated through the inside of said solution to be detected; a mixer for mixing a reagent, which changes the optical characteristics of only a specific component in said solution to be detected into said solution to be detected; and a computer for controlling said mixer to analyze an output signal from said photosensor.

wherein the concentration of a specific component in said solution to be detected is determined from the measured

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values of output signals from said photosensor 1 and/or 2 before and after the mixing of said reagent.

8. An apparatus for measuring a concentration of solution comprising: a monochromatic light source for projecting a substantially parallel light; a polarizer for transmitting only a polarization component in a specific direction out of said substantially parallel light; a sample cell for holding a solution to be detected such that the light transmitted through said polarizer transmits therethrough; a means for applying a magnetic field on said solution to be detected; a magnetic field control means for controlling said magnetic field; a magnetic field modulation means for vibration-modulating said magnetic field in controlling said magnetic field; an analyzer for transmitting only a polarization component in a specific direction out of the light transmitted through said solution to be detected; a photosensor for detecting the light transmitted through said analyzer; a lock-in amplifier for performing a phase sensitive detection on an output signal from said photosensor by using a vibration modulation signal from said magnetic field modulation means as a reference signal; a means for calculating the optical rotation of said solution to be detected based on the vibration control signal from said magnetic field control means and the output signal from said lock-in amplifier, and converting it into

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the concentration of an optical active substance; a mixer for mixing into said solution to be detected and a reagent, which changes the optical characteristics of only a specific component in said solution to be detected; and a computer for controlling said mixer to analyze the output signal from said photosensor,

wherein a protein concentration of said solution to be detected is obtained from measured values of the transmitted light intensities of said solution to be detected measured before and after the mixing of said reagent, or from measured values of the output signal from said photosensor by considering the output signal from said photosensor as the signal of said transmitted light, and said protein concentration and the concentration of the optical active substance other than said protein of said solution to be detected are determined from said calculated optical rotation and said protein concentration.

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